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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/494,761	01/31/2000	Hyeon Jun Kim	P-082	3903

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EXAMINER

SHERALI, ISHRAT I

ART UNIT PAPER NUMBER

2621

DATE MAILED: 02/12/2004

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/494,761

Applicant(s)

KIM ET AL.

Examiner

Sherali Ishrat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-19 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11 is/are allowed.
- 6) ☒ Claim(s) 5-8, 12-19 and 22-27 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on *** has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 6, 14-19 and 22-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 6, claim recites in lines 2-3, "determining similarity of reliability information indicative of accuracies of region representative color values" .

Specification in page 5, lines 5-6, discusses reliability score relating to an accuracy of the regional representative color. However specification fails to show or discuss how reliability score relating to an accuracy of the regional representative color is determined or calculated.

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Regarding claim 14, claim recites in lines 7-8, "second value is a reliability score indicative of an accuracy of the regional representative color". Specification in page 5, lines 5-6, discusses reliability score relating to an accuracy of the regional representative color. However specification fails to show or discuss how reliability score relating to an accuracy of the regional representative color is determined or calculated. Claims 15-19 and 22-26 are dependent on claim 14 therefore they are also rejected.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 5, 7-8 and 12 and 27, are rejected under 35 USC § 102 (b) as being anticipated by Vellaikal (Joint spatial – spectral Indexing for image retrieval, IEEE 0-7803-3258-X).

Regarding claim 5, Vellaikal discloses determining color similarity between a reference image and target image (See Vellaikal, paragraph 2, page 868, first column, lines 10-14, Vellaikal, shows determining similarity of two images Q, and T with respect to region r_i and Vellaikal shows in paragraph 2, page 868, first column, lines

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14- 15 regions are represented with color such as gray and black i.e. Vellaikal is determining color similarity between a reference image [Q] and target image [T]);

each of which is represented by hierarchical grid levels (See Vellaikal, in figure 1 (a) and paragraph 2, page 867, second-column, lines 9-12 regions of image are split into hierarchical grid levels using quad tree and examiner notes that for comparing two images such as Q and T with respect to sub region level each image has to be split similarly in hierarchical grid levels),

determining step including cross matching grid levels of the reference image with grid level of the target image (See Vellaikal, paragraph 2, page 868, first-column, lines 10-14, Vellaikal shows cross matching grid levels of the reference image with grid level of the target image by showing determining similarity of two images Q and T with respect to region r_i , i.e Vellaikal shows cross-matching is matching grid levels of the reference image with grid level of target image with respect to to region r_i)

searching images based on a content-based query by a user (See Vellaikal, paragraph 2, page 867, second-column, lines 1-5, Vellaikal shows image retrieval using sub region [spatially localized feature] of the image by processing query i.e. Vellaikal shows searching images [image retrieval] based on a content-based query by a user [query based on spatially localized feature]).

Regarding claim 7, Vellaikal discloses matching the grid levels of the reference image with respective one of the grid levels of the target image and cross-matching grid levels of the reference image with grid levels of the target image (See Valliakal ,

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paragraph 2, page 868, first column, lines 10-14, Vellaikal, shows determine similarity of two images Q, and T with respect to region r_i i.e. similarity with respect to region r_i of two images is matching matching the grid levels of the reference image with respective one of the grid levels of the target image and cross-matching grid levels of the reference image with grid levels of the target image).

Regarding claim 8, Vellaikal discloses matching region representative color values between the grid level of the reference and target image (See Vellaikal, paragraph 2, page 868, first column, lines 14- 15 regions are represented with color such as gray and black and Vellaikal is determining similarity of two image with respect to region r_i as shown by Vellaikal in paragraph 2, page 868, first column, lines 10-14, i.e. Vellaikal discloses matching region representative color values between the grid level of the reference and target images [Q and T]).

Regarding claim 12, Vellaikal discloses searching a same position and different position between same levels in the case search is performed by matching a color region (See Vellaikal, paragraph 2, page 868, first column, lines 14- 15 regions are represented with color such as gray and black and Vellaikal is determining similarity of two image with respect to region r_i as shown by Vellaikal in paragraph 2, page 868, first column, lines 10-14, and Vellaikal in paragraph 2, page 867, second column, lines 1-15 shows images are split into hierarchical levels and images are search/retrieve using queries to match/search given sub regions in the database for retrieval/search to match sub regions Vellaikal has to search a same position and different position between same levels to determine the best match).

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Regarding claim 27, Vellaikal discloses multilevel image data structure which is expressed based on an image grid having at least two different hierarchical levels (Vellaikal, figure 1a, paragraph 2, page 867, second –column, lines 10-18, Vellaikal shows splitting of image in hierarchical spatial structure which image at different spatial resolution i.e. Vellaikal shows multilevel [multiresolution] image data structure which is expressed based on an image grid having at least two different hierarchical [levels 1 and level 2]).

Allowable Subject Matter

6. Claims 9-11 are allowed over prior art of record.

Claim 13 is objected as being dependent on rejected base claim but would be allowable if rewritten in independent form including limitations of the base claim and any intervening claims.

Remarks

7. In the amendment/arguments filed on 12/29/03, applicant argued that:

Vellaikal article does not disclose determining color similarity between a reference image and a target image by cross-matching grid levels of the reference with grid levels of the target image. Instead, Vellaikal is limited to matching only grid levels that are on a same level.

Examiner strong disagree with applicant, that Vellaikal article does not disclose determining color similarity between a reference image and a target image by cross-

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matching grid levels of the reference with grid levels of the target image. Vellaikal, paragraph 2, page 868, first-column, lines 10-14, Vellaikal shows cross matching grid levels of the reference image with grid level of the target image by showing determining similarity of two images Q and T with respect to region r_i , i.e Vellaikal shows cross-matching is matching grid levels of the reference image with grid level of target image with respect to to region r_i . In the article of Vellaikal determining similarity of two images Q and T with respect to region r_i is cross-matching. Further specification does define cross-matching to matching only grid levels that are not on a same level. Examiner consider any matching of two images is cross-matching whether on a same level or different level.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherali Ishrat whose telephone number is 703-308-9589. The examiner can normally be reached on 8:00 AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on 703-305-4706. The fax phone numbers for the organization where this application or proceeding is assigned are 703-892-9314 for regular communications and 703-892-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-4750.

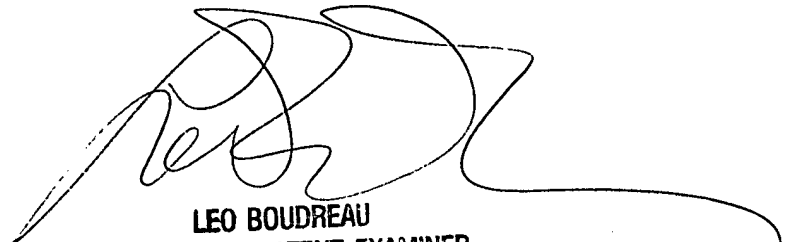


Ishrat Sherali

Patent Examiner

Group Art Unit 2621

February 4, 2004



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